

# University Chronicle

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## THE COLLEGE OF COMMERCE IN ITS PRACTICAL RELATION TO BUSINESS AFFAIRS.\*

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By BENJAMIN IDE WHEELER.

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I am glad to meet you, members of this Association, because I believe I see in you one of the most important parts of the constituency of the University to which I belong. In a large measure, gentlemen, the university is dependent upon you and the work you are undertaking. You, gentlemen, are in a large measure dependent upon the university and its work. The day has passed when the university existed to train men solely for a certain narrow list of vocations, either for lives of leisure as gentlemen's sons, or to professions such as the ministry, the law, medicine, and teachership. The university has come to see—the modern university—that it has to do with all that concerns life and the interests of life. The modern university has seen the vision of Peter on the housetop, and no man now dares call anything that belongs to the divine interests of human life either common or unclean. The university belongs to the world, and no man dare set a barrier between the interests of human life and the work of human life, and the university. For such a barrier

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\*Speech by President Wheeler at the second annual banquet of the Merchants' Association of San Francisco, November 27, 1899.

would be to-day unmeaning, unreal, and nugatory. A measure of the success of the university is established according to the law of a kingdom that is not dimly seen in cloudland, like the visions of a new Jerusalem let down out of heaven, but according to the law of right and the ideal of a life that exists among men here to-day; the kingdom of light—lo, it is among you! That is the university idea; that is the lesson which the university goes forth to preach. The university has as its mission to call into being, to lead out to action, the forces that throb in the forward movement of the ambitions and yearnings of commercial and social life. It is not a question of the university's coming down from its holy mountain to bemire itself amongst the activities of commerce, of mining, of field-tilling, of trade; but it is a question of how the university shall lift those activities that swarm in the mist of the lowlands, without perspective of ultimate purpose, without knowledge of the plan of things, without insight into the purposes of history, without knowledge of the whence or the whither—how it shall raise these with itself into the uplands, where there is scope and outlook; where hillside and field, river and harbor, shore and ocean, yield themselves to the plan of the great map which sets forth the purpose of things, the trend of things, and the real meaning of things. That, gentlemen, is the work of the university—to know what life means, to put meaning into life and the activities of life, to call men away from slavery—for slavery, gentlemen, is not reckoned in bonds or in prison walls; it is reckoned in terms of ignorance and of the humdrum rule of thumb. The university grants the liberal education that makes the liberated man. Man liberated from ignorance of the whence and the whither, from ignorance of the plan of things, ignorance of the great flow in the tides of human affairs, ignorance of the map of things. The university seeks to lift all the activities of men into the upland. It seeks to touch all the activities of life with the divine touch of God, which shall

make them all have meaning to men, meaning in accordance with the sum of things and in terms of the trend of things. That is why the university has the right to have a school of commerce.

The educated engineer is a liberally educated man if he is able to face a situation, to control conditions, if he knows what is the working of the natural forces with which he deals, so that he is not staggered at a new combination of obstacles. He controls, and not the forces. That is what we mean by a liberated man. The university has been giving you civil engineers and mechanical engineers. All the great electrical works of this country to-day are handled by university-trained men. We have in our institution a school of pharmacy. What the university has done for the craft of pharmacy is to touch that common craft of mixing medicines with a vastly higher meaning than it used to have. It has lifted it into communion with the meaning of the materials and the forces with which it has to deal.

Germany led the way in applying what the university had to teach to commerce and commercial problems. Look, for example, at the preëminence which Germany has in the production of dye stuffs. And yet most of us here can remember when the German aniline dyes were an experiment, when men said they were the foolish dream of crack-brained chemists from the universities. Most of us can remember Germany's first experiments in beet-root culture. Men said that was a vagary of university men. You go out to-day into the nearer East, and find in Asia Minor, in Turkey, in Greece—find everywhere the German consul as a trade agent. He can speak the language of the country. If he is in Persia, he speaks Persian. If he is amongst the Afghans, he speaks Afghan. You wonder why that is. The Berlin seminaries have been at work for ten years, according to a consistent plan, preparing Germany for its commercial activity of to-day. And the broad path that German diplomacy has been sweeping

down across southeastern Europe, across Austria, and by way of Turkey into Asia Minor, opening to it the markets of all that portion of the world, has been due to German university thought touching with magic wand the common narrowness and sordidness of trade, until to-day it is the dustpans and the pitchers and the dippers and the toys and the clothespins of Germany that are going into Asia Minor and bringing back wealth into Germany. Germany is to-day a prosperous and a powerful country, because she has had what has amounted to a school of commerce and a school of consuls. The far-sight of the present German government has reached further than that, and we are feeling, seeing, the influence of it to-day.

A school of commerce does not represent any new departure on the part of our University. It is the natural output of the University; the prescience of Mr. Arthur Rodgers discerned this sixteen years ago, when in a commencement address Mr. Rodgers told this State what it would need, how the time and the conditions were coming that would call for an institution of this sort. The prescience of the Emperor of Germany, the most intelligent ruler in Europe to-day, told Germany what she would need. And it was through him and his advisers that the work was begun at Berlin ten years ago.

A school of commerce is a simple differentiation out of the plan of the university. It simply is a differentiation in the organization of the work of the university, which is intended, in the first place, to display what the regular university courses already offer applicable to the subject; in the second place, to lead the way toward a proper supplementing of what is already done. It proposes not alone to fill men with knowledge, not to dress men up, for men who are dressed up with things remain dressed up as they may be, either dummies or scarecrows; but it proposes that they shall be trained in subjects which will naturally lead them into the practice of commercial life, as agents and leaders of commerce.



Is there a need for such a departure as this seems to be, at the University of California? It seems to me that the time is amply ripe for it. That is why we appeal to you to-night to tell us how we shall have the means to go on with the work that is making insistent, enormous demands upon us. There is open before you, gentlemen of San Francisco, an enormous field of opportunity, and of responsibility. The ways of trade have been, since man was, the great arteries of the world. Religion, literature, arts, sciences, have flourished, in great measure, in accordance with the routes which trade has taken. Wealth, as the foundation of opportunity in life, has conditioned the arts, literature, and science; and wealth has been consolidated about the great trade routes. From time out of mind, before history was, men have gone for wealth to the place where humanity is packed closest together, and where industrial activity is at its highest tension—to India and China. Men have not changed much. We have electricity and steam. That is about all that makes the world of to-day different from the old world. We are men, and the lessons of human ambition and human greed taught by the old world are applicable to the present. China and India have been simply the great high reservoirs from which the conduits have been built, and the conduits are the trade routes.

Look at the map to-day. All the nations of Europe are building their trade routes. The Emperor of Germany made his spectacular visit to Jerusalem in order to pave the way for the railroad that Germans are going to build to the head of the Persian Gulf, paralleling the English route by the Suez Canal. Look at the North, and see that great stretch of railway finding its way over toward China and the Pacific, making Russia now a factor, because, for the first time, she can find her way to the open sea.

Look at our own continent, and find the trade routes pushing their way westward, the Canadian Pacific, the Northern Pacific, the Great Northern, the Union Pacific,

the Southern Pacific, the Santa Fé, all of them pushing to the west and joining with lines of steamships to find their way still toward that old goal which the caravans sought, the goal of the far East and the riches of Cathay.

California has gone through a history of development. First, it sought its wealth in its hillsides and mines, then in its central valleys, and suddenly, lo, it has discovered an ocean. The ocean is yours. As surely as the trade routes find their way toward the far East, so surely has California a first part to play in the great work that the next century is preparing for the world. You cannot change the fact, you cannot turn back the shadow that advances on the dial of time. You can only rise to meet the call which the advancing shadow makes upon you. And it is "up to you," gentlemen of San Francisco, to meet your opportunity. Will you let Seattle do it, when you have the better harbor and the better location?

The University undertakes to help you. It asks you to help it. It is a great institution, full of hard and able workers, thronged with students, but ill supplied with the means with which to do its work. I have no lack of faith in that regard—you and the State of California will provide the means. We propose to tell you what we want, and we know we shall have what we want. We are going to have there a school which shall prepare men to aid you in finding out what the world wants. Germany has sent her consuls into the outer world as trade agents. You never found a German consul in a city of Asia Minor who was appointed because he was somebody's man. You find men put into places by the German government because they have been trained to the work. American merchants are going to find out, if they have not already done so, that we have suddenly become an exporting rather than an importing nation. Most of our merchants who have hitherto been racking their brains about how to keep other people's wares out of their market, will spend the rest of their days, I ween, racking their brains how to prevent other people

from keeping American wares out of their markets. And when you merchants find that out, as you are going to do, as the merchants of a good many cities have already done, then you will insist upon it that the American consul should be a trade agent, that he should know the country to which he goes, and that he should represent something besides politics.

I expect that healing will come to our political system very much as it came to England, not from within, but from without. Our churches have been purged of sloth and indolence by having to do missionary work. The missionary work has reacted upon them. And I fancy that when we get out of ourselves a little, we shall be refreshed and uplifted thereby. Just as England learned civil service reform by the necessities of work in the outer world, I expect that we shall learn it. We shall learn it, and our merchants will insist upon it. It will not have to be an artificial matter of agitation by pale-faced reformers, but it will be forced upon the government by square-shouldered, deep-pocketed merchants. I expect, gentlemen, that civil service reform will come to us by the pressure that you will bring to bear upon the government. We have got to go into real business and get away from this sport of politics.

I would like to talk to you about the school of commerce and its needs in detail, but there are others who will do that. I have only this to say in conclusion, gentlemen of San Francisco: We have a great work before us in this next century that is trudging along to meet us, and I want you, with the two universities of this State, to grab hold of this twentieth century, restless, turbulent young fellow as he is likely to be, and take him by the nape of the neck and hold him up to his business.

PERSONAL AND POLITICAL INTERFERENCE  
WITH THE ADMINISTRATION OF  
EDUCATIONAL INSTITUTIONS  
AND AFFAIRS.\*

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By GEORGE C. PARDEE.

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*Mr. President, Ladies, and Gentlemen:*—There is no more honorable and honored vocation than that of school-teacher. Upon the faithful performance of the duties devolving upon you depends the proper education of our sons and daughters; and upon their proper preparation for the duties of life depends the future of our free institutions. For, from those who pass through your hands must come not only those who are to rule and govern, but also those who are to be ruled and governed. Not only is it necessary to have intelligent and well-equipped rulers and governors, but it is also necessary to have educated and well-equipped men and women to be ruled and governed, if the free institutions and the personal and public liberties we now enjoy are to be preserved and continued to future generations. Any influence, therefore, which tends to cripple your influence, interfere with your usefulness in your chosen vocation, or divert your attention from the matters you have in hand, is dangerous to the public welfare, and should be dealt with accordingly. Our public schools cost us much in dollars; but they repay us an

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\*A paper read at a meeting of the California Teachers' Association, at Sacramento, December 27, 1899.

hundred fold in the men and women they give us to take our places in the body politic, and administer and conduct our public and private affairs.

As President Jordan has so clearly shown, the greatest menace to the full success of our public school system is the blighting influence of "practical" politics, which strives to substitute for natural and acquired fitness for the positions you occupy the evil power of the professional politician, who would turn the schools into havens of rest for the friends and supporters of those who manipulate primaries and personally conduct conventions. I am not prepared to believe that the politician has yet gained a position of such great command in our public schools that he cannot be easily deposed; and I pray God that he never may. I have an abiding faith in the loyalty of the common people of my native State toward the institution they love so well and support so handsomely. And I am convinced that they will not permit so grievous a wrong to be perpetrated upon their children and their State.

On the contrary, however, I am not blind to the fact, that there are people who have tried and are now trying to control our schools for their own benefit and the benefit of their political friends, and who would, if they could, traffic in positions and reward political services by appointments in our school houses. To head off and frustrate these wicked attempts to prostitute and cripple our schools should be the aim of every person who loves his country (native or adopted) and desires to see it prosperous, free, and independent.

In this you are much interested. For the permanency of your positions and the best results of your work depend upon the sacredness of the public schools from the attacks of the predatory politician. Your best work can be given only when you are sure that devotion to your duties, and not to politics, shall be the rule by which your fitness for the positions you now occupy shall be measured. "Eternal vigilance is the price of liberty" as much in the conduct of

the public schools as in any other public affair. If, therefore, you would free the public schools and keep them free from the evil influences of "practical" politics, be vigilant in their defense, and do your utmost to root out the evil before it gains a foothold which will make it master of the situation.

The public school system should be an entity complete in itself, from the primary class to the crowning capstone, the State University. The scholar entering the lowest class should pass directly from grade to grade—from infant class to grammar school, to high school, to University—without any break in his progress, a certificate of proficiency in any lower grade entitling him to advancement to the next higher grade anywhere in the State. As it is now, there is a separate standard for almost every county. Each county board, being a law unto itself and empowered to prescribe the course of study pursued in its schools, and to examine and certificate teachers, sets its own educational pegs, so to speak, without any particular reference to what is being done by the boards of its sister counties. As a result of this, confusion must, and does, reign.

Here, too, is the danger of politics getting its hold upon the lower (and, consequently, the most important) rung of the educational ladder. The County Boards of Education are appointed by the Boards of Supervisors, and are, therefore, to a greater or less extent, under political control. The present law was originally framed when California was comparatively in its infancy, before we had many high schools, when the University, as it now is, was a dream of the future, and when education had hardly become the science it now is. The State has long since outgrown the law then framed. Its common schools have increased a thousand fold, high schools are nearly as numerous now as low-grade schools then were, and at the head of our school system stands our magnificent University, the pride of the State and the peer of any institution of its kind.

The law giving the Boards of Supervisors the power to

appoint the County Boards of Education provides that at least two of the appointees shall hold grammar-grade certificates. The other two appointees may or may not be (and frequently are not) thus equipped. In nearly every county in this State there is now at least one high school. Is it reasonable to put the control of the high schools, and the examination of their teachers, into the hands of men appointed by Boards of Supervisors, the only requirement being that two of the members of the board shall be school men, and they to have only grammar-grade certificates? I think not. Nor does it seem reasonable that the examination of any teacher should be conducted by persons who do not follow the profession of teaching, and are, therefore, not qualified to judge as to the fitness of candidates nor the qualifications required for successful teachers. The State has shown greater wisdom in the examination of candidates for the privilege of practising medicine or law. Those who desire to become lawyers are examined by lawyers; and the embryo doctor must prove his proficiency before a board of physicians ere he can minister to our physical ailments. The proper education of our children is at least as important as the proper grounding of the lawyer in his profession. Why, then, should a teacher not be examined by those who are at least his peers in educational matters?

Our normal schools now number five. Their purpose is to train young people in the proper methods of teaching our children. From them are supposed to come expert and proficient teachers. If the positions of teachers in these schools are to be political perquisites, if the question of absolute fitness is to be of secondary importance in the selection of those who are to fill these positions, while political services, either of the teacher or his friends, rise paramount, can these schools be up to standard?

A County Clerk and all his deputies may be politicians pure and simple, and yet conduct the office of County Clerk well. But the instant politics comes into our schools and

makes our teachers politicians, that instant our schools begin to deteriorate, and our children must suffer the consequences. This must certainly follow, for the reason that teachers, instead of making their positions secure by devotion to their duties, would then feel that they must depend upon politics, and, therefore, neglect the former for the latter. The normal schools are each governed by a Board of Directors appointed by the Governor. These boards have the appointment of all the teachers and all the other employees of each school. It is true that the law says that the President of each school shall have the nomination of all the teachers under him; but the Board appoints the President—and that is the same thing as if the Board appointed all the teachers, if the Board wants to do politics. Each Governor has the appointment of the Directors of each school. Such a state of things must, of necessity, result in great disturbance in each school with the election of each new Governor and the consequent appointment of each new Board of Directors. This is more the result of the system than the fault of the Governor, who feels that he is compelled by party usage to follow the example of his predecessors and appoint his political friends and the friends of his political friends as directors for such institutions. But the result (whether the fault is that of the system or the Governor) is bad on the institutions involved in it.

The State University is governed by a Board of Regents, by whom are appointed all the teaching corps and other employees of the institution. The Board is composed of twenty-three members, seven *ex-officio* and sixteen appointed by the Governor for the term of sixteen years each. The terms of the first appointed Regents were so arranged that no Governor can appoint, in the usual order of things, more than five or six of the appointed Regents; and the law, by a wise provision, compels the appointment of a non-partisan board. Hence it happens that no Governor can appoint or control a majority of the Board, and that no



political party can have the unanimous control of the Board. And, as a corollary, it follows that there can be no attempt on the part of any Governor to put the University into politics and make the appointments of the Board of Regents the reward for political services rendered. The University never has been in politics, and never will be, I am convinced, so long as the Regents are appointed as they are.

Now to review the situation. We have County Boards of Education, four of them appointed by the Supervisors (two of whom must have grammar grade certificates, two of whom may not have this certificate) and the County Superintendent of Schools. The appointed members of the board generally change with each new Board of Supervisors, and the County Superintendent (always a political office) changes, as a rule, with every election. How is it possible, then, under an arrangement wherein politics is the main-spring, to keep the professional politician from, at least, trying to use our schools for his own purposes?

The same question may be asked with regard to the normal schools, whose governing boards change with each new Governor.

But when we come to the University, governed by a non-partisan Board of Regents, holding office for sixteen years, and, therefore, beyond the control of any single possessor of the appointing power, we find it totally divorced from politics,

The State is, and should be, the protector of the schools; for upon them must it depend for those who are to defend and maintain it. The State has taken full charge of the higher schools—the normal schools and the University. Why should it not take full charge of the whole school system? It manages the University well, and, if it were not for the possible question of politics, would manage the normal schools equally well.

The remedy for the danger of political interference in the public schools seems, in the light of what has already

been said, a comparatively easy one to bring about. Let the State take full charge of the school system so far as regards the examination and certificating of teachers and the prescribing of the course of study, and govern them through non-partisan boards of directors appointed in such numbers and for such lengths of terms that no single possessor of the appointing power can hope to control their actions. A few amendments to the Constitution and the passage of a few laws by the Legislature are all that is required. Whenever the people are aroused to the situation and make the demand, the reform will be brought about.

It may be urged against this scheme that it substitutes for the comparatively simple scheme of county boards now in vogue a more cumbersome and expensive one. What if the expense is greater, if the result desired is obtained? Are not the public schools of sufficient importance to warrant greater expense, if thereby greater efficiency and greater security may be obtained?

As for the comparative simplicity and cumbersomeness of the present and proposed systems, it seems to me that the present system of a county board for each of fifty-seven counties, with no coherence and no dependence, the one upon the other, is much less simple than the proposed one, which seeks to substitute for a disjointed, loose-ended scheme one that is compact and complete in itself, and assures us a school system with its seams all lockstitched and its borders all hemmed.

It may also be urged that it will be inconvenient for candidates for teachers' certificates to be examined by such a board as the proposed one rather than by county boards holding sessions in the near neighborhood of the candidate's home. To this I reply that the profession of teaching is now of such importance that the convenience of applicants for positions should be of only minor importance. The success of the school system should be the only matter to be considered. We now have five normal schools in this State, the avowed object of which is to prepare teachers for

the scientific training of our children. Our State University also offers a course in pedagogy. The days of appointing as teachers those who can answer a certain number of questions in a few elementary studies are now passed, and the candidate for a teacher's position should be required to show special preparation and training for the profession he wishes to follow. The State places at the disposal of all who desire to be teachers special schools for that purpose. Why should not the State, then, require all who wish to teach in its schools to produce evidences of fitness represented by a normal school diploma or other evidence of equal value? The State requires those who would practice medicine to produce evidence of having attended a special school, and the time is not far distant when the same requirement will be necessary for the practice of the law. Is the fitting of our children for the proper assumption of the duties of citizenship (to say nothing of the personal equities involved) of less importance than the practice of medicine or law?

It may also be urged against the proposed scheme that it would place the management of our schools in the hands of an irresponsible board, and that this is foreign to our form of government. The University is in the hands of just such a board, and has been since its very inception. The success of the University is answer enough to this objection. Of course, the proposed board will be composed of human beings, and *humanum est errare*, but *errare* is as common (or, perhaps, commoner) among the untrained as among the specially trained. The final results will, I think, justify the means.

## THE RECENT WAR WITH SPAIN FROM AN HISTORICAL POINT OF VIEW.\*

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By BERNARD MOSES.

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In discussing the historical significance of the recent war with Spain, I am conscious of the difficulties in the way of reaching satisfactory judgments concerning great events that lie partly in the experience of the immediate past. We know less about this conflict than the scholars of the next generation will know. Its significance, like the significance of any important contemporary social movement, is not yet unfolded, and consequently no man may read it. Whatever judgment is rendered to-day touching the late war between the United States and Spain is only such a judgment as may be revealed by the light of the history of these two nations; and in this light the struggle appears as a phase of the centuries-old conflict that has arisen from antagonistic national qualities and divergent national policies.

This English and Spanish rivalry has sometimes led to brilliant and romantic exploits, but oftener it has held the two peoples in a state of mutual indifference and contempt. Though sometimes latent, this antagonism has never been subdued in either party. In the days of the great Armada it manifested itself on the part of Spain in a theatrical undertaking to crush the English nation and to drive the

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\*An address at a meeting of the Teachers' Association of Northern California, October 27, 1899.

English flag from the seas. But the wrecks of the proud fleet littered the shores of Northern Europe, and the standard of England continued to be carried over the ocean without permission from Spain. In the same spirit, in the last half of the eighteenth century, the Spaniards, in possession of Louisiana, undertook to close the mouth of the Mississippi against the settlers of English stock who were laying the foundations of civilization in the West. Later, on the plains of Texas, there was hostility when the presence of the two peoples led to inevitable conflict. And finally, in the West Indies, has come the last phase of the contest.

The ultimate outcome of this conflict was long ago foreshadowed by the fate of France in her rivalry, on this continent, with men of English blood. The long struggle for supremacy in America between the English and the French peoples began with the beginning of the period of discovery and settlement. Decade after decade the French and English pioneers penetrated the wilderness and claimed lands for their respective sovereigns. The great prize to be won was the Valley of the Mississippi. It was the opportunity of a nation's life-time, and it presented no chance for compromise. Before the tribunal of force the cause went against France, and she withdrew from the western continent. In 1762 she surrendered all her vast possessions in America. The result of all her colonial enterprises, of the sacrifice and daring of her subjects, passed from her forever.

The fate of France has been repeated in the misfortunes of Spain. Here two nations, the French and the Spanish, have been obliged to relinquish participation in the greatest undertaking, and to renounce the greatest opportunities, of modern times; and it was the English people in both cases before whose advance they withdrew. In both cases the English stock won. In both cases, moreover, power remained with the colonies of large local independence, while those closely bound to the central authority of the

parent state were overcome and passed under foreign dominion.

As it regards the Spanish possessions, what has been accomplished through the recent war with Spain is to end a movement begun in 1810, when all of the Spanish colonies on the American continent asserted their wish to be emancipated from Spain. The earlier phase of the movement for Spanish colonial emancipation had its origin in the ideas of political liberty generated in the English colonies; ideas that stirred our fathers to demand their independence from the mother country, and moved them to risk whatever was dearest to achieve that independence. For it was the ideas born in the thirteen English colonies that formed the spiritual ground and inspiration of the French revolution; and from France and the United States went forth the doctrines that incited the Spanish colonies to begin a struggle for freedom. From Mexico to Buenos Ayres the war for emancipation filled the land with tumult and confusion for fourteen years. Finally, with the last overthrow of Spanish authority in Peru, in 1824, the independent nations of Spanish America were brought into being. It was the ideas, the spiritual power developed in the United States, that had set them free.

Thus, influence proceeding from the United States, put forth through ideas that have formed the basis of our political life, caused Spain to withdraw from continental America. If this were the whole story, Spain's defeat in her first encounter with her rebellious American colonies would be in the highest degree pathetic; but the sympathy of the world is in some degree checked by the thought that the fundamental causes of Spain's decline lie in her own character and conduct.

Spain failed in this first encounter because she was proud, and in her pride underestimated all persons not born within the limits of her European dominions. In spite of all their traditions and the purity of their blood, men born in Spanish America were counted unworthy of

the king's confidence, and unfit for the higher offices in the colonies. Hardly more than one per cent. of the highest officers in Spain's American possessions were born in America. With few exceptions they were born in Spain, educated in Spain, and brought to America the Spaniard's low opinion of those who constituted the bulk of the society of the colonies. This low opinion on the part of the governors grew into contempt, and the consequent resentment of the colonists grew into hostility to the government. Thus was established an antagonism which increased with the growth of population and made reconciliation impossible. And in this antagonism we discover one of the causes of the earlier war for Spanish-American independence and the overthrow of Spanish authority on this continent.

Spain failed because she was greedy of wealth, and in her greed undertook to contravene the normal operation of economic forces. She explored and settled a large part of the territory of America, and endeavored to make this vast region render tribute only to Spain. By an elaborate system of laws the trade between Spain and her colonies was subject to intolerable monopolies and strangling restrictions; and trade between the colonies themselves was prohibited. Under this system Spanish colonists in America were unable to obtain wares from Europe except at prices that were almost prohibitive; and the government lent the strength of its authority to support these grinding exactions. Under this system the Spanish colonists found advantage in trade only where the laws were broken, and trade was carried on with the smugglers from other countries. They opposed the Spanish policy because it ran counter to their interests. The industrial and commercial restraints with which Spain hampered the economical development of her American colonies constituted a standing grievance, and under the influence of this policy of commercial jealousy "her population declined, her manufactories were ruined, her merchant marine ceased to

exist, her capital was diminished, foreigners carried on her commerce by smuggling, and all the gold and silver of the New World found their way to other countries than Spain." By centuries of unreasonable discrimination and unjust restriction Spain had forfeited her parental rights, and emancipation was the inevitable step forward.

Spain failed because of her moral weakness, through which the nation was prevented from raising an effective voice in condemnation of official corruption. When the opportunities of political office are used for personal gain rather than for the fulfillment of a patriotic duty, the foundations of a state are indeed insecure. A nation that is rich, even in this condition of affairs, may stand many years; but Spain was poor, and early suffered the ruin that, ultimately, in spite of wealth or power, follows the overthrow of public morality.

Spain failed because she was intolerant, and in her intolerance made religious belief the test of good citizenship. In the earlier centuries the Jews and the Moors were unable to meet this test and were driven out of Spain. Thereby the nation suffered an irretrievable loss of commercial and financial ability; and the Spaniards were, therefore, obliged to face the difficult problems of their colonial undertaking with little financial ability and less commercial sagacity. The empire which they constructed, however perfect the unity of its faith, was weak in its economical joints, and the first storm it encountered made it a wreck.

This storm came with the uprising of 1810 and lasted till 1824, when Mexico and all the possessions of Spain on the American continent became free from Spanish control. This, however, was not the result of the individual colonies acting separately. On the contrary, through union under great leaders they were enabled to present a force that Spain could not resist. After the liberation of Buenos Ayres, San Martin gathered an army at Mendoza, on the eastern slope of the Andes, and crossed the mountains to



support the cause of independence in Chili. Then the combined armies of Buenos Ayres and Chili descended upon the Spanish forces in Peru. At the same time from the north came the army of Bolivar, which had already overrun and liberated New Granada and Venezuela. On the soil of Peru, the headquarters and center of Spanish power, the two armies were united to put an end to Spanish rule in South America. In the same years in Mexico the war for independence had run its course, and the ancient viceroyalty of New Spain was transformed into the republic of Mexico.

Through this great popular movement, involving all the continental colonies of Spain, a number of independent states came into being, and a number of republics undertook to repeat the experience of the United States. But this successful movement for independence failed to reach Cuba and Porto Rico, and they remained still for three quarters of a century under the dominion of Spain. Their persistent struggle against superior authority indicated that they were moved by the same desires that had led the other colonies to freedom, but that they lacked the power to achieve their independence. The Cubans and Porto Ricans were isolated, and as the Spaniards dominated the sea there was no opportunity for them to form alliances either between the inhabitants of the two islands or with the colonists of the mainland. But in spite of their isolation and the apparently hopeless task before them, the Cubans never put aside their ambition to be free; and it was this ambition that upheld them in the long years of their demoralizing struggle. From every attempt to gain their independence they recoiled defeated and degraded. Whatever measure of civilization they had achieved was imperiled, and the island was wasted under fruitless contention.

From this point of view the recent war appears as the means and occasion for finally severing the bond by which Spain held possessions in America. It completed the work

of emancipation begun in 1810. It closed the most remarkable episode in Spanish history, and one of the most remarkable episodes in the history of the world; an attempt to monopolize on behalf of an illiberal government the settlement and trade of the better part of a continent. It brought to an end the most thoroughgoing system of colonial protection ever constructed.

It was the ideas furnished by the United States that set free Spain's continental colonies, and it was the ideas furnished by the United States, backed by the power of the United States, that enabled the island colonies of Cuba and Porto Rico to sever the bond that bound them to their mother country. In both cases the hand of the United States has contributed largely to Spain's undoing. If there are other causes they are not to be found in a lack of power on the part of Spain to organize, but rather to a failure to conceive and pursue purposes worthy of a nation's activity. For it is difficult to find anywhere in the world a more perfectly organized body of institutions than those created to control the affairs of the Spanish colonies in America. When we consider at how many points they touched the life of the subjects, and with what precision they worked for centuries, it is impossible to withhold our admiration for the genius that brought them into form. It was not on the side of her institutions as a system of social organization that Spain was weak. Her weakness displayed itself in her inability to find and adopt a proper object towards which to direct the operations of her institutions. She invented means that were efficient, but she had no supreme purpose which the nations of progress could permanently approve. Her institutions were carefully wrought out and rigidly determined. They were capable of resisting successfully any shock from the side of the reformers. And her ideals were like her institutions: when once formed and approved, as they were, by the ecclesiastical spirit of the nation, they were conceived as fixed and established as surely as an item of the everlasting

truth. The revelations of thought and the modifications of environment, which change our ideals with every passing year, have left the ideals of the Spaniards essentially unchanged. They have resisted the promptings of the revolutionary spirit, and have consequently lacked the boon that revolution has brought to other nations. Spain has remained behind in the race of European civilization because she never had the intellectual freedom or moral courage to change her ideals, or a sufficiently sweeping revolution to break the rigidity of her institutions.

During this century the English have received unstinted praise for their heroic and unselfish efforts in driving the French from the Spanish peninsula. In view of the fact that our gratitude rises instinctively to him who averts an immediate evil, it was only natural that the world should applaud Wellington and his followers, the first to turn back the conquering armies of Napoleon. But as we see more clearly the great facility the French have displayed in progress since the revolution, and behold what Spain has remained, we may fairly question the wisdom of the Spanish in wishing to be protected from their northern neighbors. What Spain needed then was not peace but revolution. Her ecclesiastical and political institutions, the very spirit of her society stood in the way of progress. More than anything else she needed a brief period of thoroughgoing destruction, in order that afterwards she might develop a modern society on a free field without the hindrance of overpowering conservative traditions. Such a regeneration might have come through the triumph of the French in the early part of this century; for the Napoleonic Empire was the revolution organized. Wherever it went, even into the wastes of benighted Mecklenburg, it carried emancipation and an impulse to a new life. But Spain rejected the revolution, and now, a hundred years later, finds herself ineffectively struggling in the meshes of ecclesiasticism and political privilege.

Considering Spain's condition, considering the inability

of the Spaniards to break the fetters of their traditions, it was not to be expected that they would close the long-continuing conflict with the English people without a final struggle, even though that struggle, to the reasonable mind, seemed to lead only to ruin. Reason is often powerless in the presence of the traditions that determine conduct; and the recent conduct of Spain illustrates how it may be impossible for a nation to break with her traditions, even to hold herself back from the brink of destruction. And this headlong conduct, this rushing on where reason fears to tread, we sometimes in our mistaken judgments admire as a manifestation of high spirit. Once the possessor of the better half of the continent, proud as bearing the inheritance of an heroic past, Spain could not yield to the demands of an upstart nation; and it is impossible to behold her facing her inevitable fate with dazed but steady resistance, without a large measure of feeling akin to admiration. The mother of nations, she has seen her children, one after another, turn against her and defy her authority; and it is only natural that in the bitterness of this last parting she should be moved to a struggle of despair.

But as the agony is finally over, Spain may now find that she has passed the crisis that marks the transition from middle life to old age. Her offspring have either set up establishments for themselves, or have allied themselves with other houses. Her expenses may be reduced, but the savings of the later years by this means have little significance. In the case of a nation, as in the case of an individual person, the important period of life is not the period when the responsibilities have been thrown off and the expense of living has been diminished.

In these years immediately following the war, Spain will have fewer obligations in relation to her resources than before. Hers will be the limited expenses of a household from which the children have departed. The expenses of her navy are greatly diminished, and there is no reason

why they should be increased. It is for Spain to recognize what it is well for every nation to recognize, that unless a navy is fairly able to be a rival of the strongest, it is a more or less useless burden on the nation. Spain has no further need of a navy, and her national existence will be quite as secure without warships as with them. In the future she will stand as other small states stand, by the sufferance of other nations rather than by any power she may possess; and other nations will be quite as likely to recognize her claim without a show of force as with it.

The war has given one more confirmation of the proposition that the tendency observed in economic affairs during the recent decades is also to be realized in political affairs; I mean the tendency to develop larger effective units for practical control. The corporation has, in a large measure, supplanted individual industry and commerce, and the larger corporations are gradually absorbing the smaller, or determining the conditions under which they may exist. The forces that are producing this result are permanent economic forces, and for this reason we may not look for a return to the individualism of earlier industrial life. And the tendency to larger aggregation is not less conspicuous in political than in economic life. Illustrations of this are found everywhere where there is national growth. The small states of the Italian peninsula have been united into the kingdom of Italy; and the petty kingdoms of Germany have been merged into the empire. The partitioning of Africa has not added many new states, has not increased greatly the number of states in the world; but it has increased in a marked degree the territory of existing states. With the advance of Russia, small states lose their individuality, and their territory is brought under the dominion of the great empire. England, in spite of the fact that her possessions encircle the globe, shows no signs of disintegration. The bonds which unite her distant lands are apparently stronger to-day than ever before. The territory of states is increasing as improvements in the facilities for

communication and transportation have rendered political control over large areas easy and free from embarrassing delays. The immediate prospect, therefore, is not of a revival of small states, but of the distribution of the effective political power in the world among a few great nations, nations that will base their claims to exist on their power to preserve the peace of the world and to extend the well-being of mankind. The smaller nations will continue to exist, as Switzerland exists, by the will of their strong neighbors. In this class Spain will find herself as a result of the war, and in this position her ancient ambition will of necessity be laid aside, and an opportunity given her to recover from the moral weakness by which she has been brought to her low estate.

Spain interests the world no more for her international relations. Shorn of her colonial possessions, she will have no occasion to involve herself in foreign quarrels, and other nations are not likely to seek her alliance. No foreign government can hope to derive from her either political wisdom or military power, and without hope of gain in some form, one nation is not usually eager to court the favor of another. The problems, therefore, which Spain has to face are chiefly domestic problems; and the world's interest in them is to observe whether a nation that has been so high and fallen so low can rise again. We are anxious to know if on the trail of the westward movement of progress there must follow the westward movement of national decline. Must the desolation which overwhelmed Assyria and Babylonia follow in the train of the ascending civilization that rises towards the west? As we push the higher phases of civilization westward, we are interested to know if we must be followed by a blight that wastes our achievements behind us.

Spain, in her culture and in her experience, stands nearer the Orient than any other European nation. If, therefore, national decay and death are on the trail of the civilized nations, we might reasonably expect them to

appear first in Spain. If for Spain there is no revival, if she must be wasted as the nations of western Asia have been wasted, then in the process of the centuries other nations may be expected to share in the same fate.

But the significance of the war with Spain is not completely set forth by a narrative of its effects on that nation. If we would comprehend its full import as an historical event, we must know the position in which it has left the United States; we must know to what extent it has modified this nation's prospects; what new problems it has presented, and what new responsibilities it has created.

The war with Spain has revealed us to ourselves as well as to the rest of the world. It has made us think that, in spite of a strong tendency to luxurious living, the nation has not lost its virility. It has shown that in spite of our joy in peace congresses, we are still possessed of a warlike spirit; and that underneath a veneering of cultivation, there remain the uneradicated qualities of the old viking or ancient Germanic warrior.

Without a conscious design on the part of the people to assume unusual burdens, the war between Spain and the United States thrust this nation into a position where it found the gravest responsibilities resting upon it, and where it is compelled by its power, by its pretensions to a high form of civilization, and by its faith in its own ideas of liberty and order, to let its influence be felt to the farthest limit of its opportunity. This policy is not a matter of debate. If what we say of ourselves is true, if there is anything in our political and social ideas that has contributed to our prosperity, then we are the possessors of the ten talents. We are under moral obligations to let the influence of our ideas be felt wherever this may be done without violating the established relations of nations. If the ideas which underlie our civilization have in them the promise of social amelioration, they are the gospel which it is our mission to carry beyond our borders whenever the turns in the fortunes of nations shall open the way. This

policy in its general features is not one on which thoughtful men can be separated into opposing parties. It is a policy that is involved in the higher civilization of a nation; and for what may come to future generations through it, patriotism demands that we should shoulder, like men who are not afraid, the great responsibilities that have descended upon us.

Events whose ultimate consequences no one was able to foresee have determined for the immediate future this nation's career. In fact, events which no one was able to foresee have determined the whole history of this nation. The affirmation of any officer of government as to what will be accomplished by any great movement has no necessary connection with what will be achieved. The individual man expresses his own consciousness and purpose, but the consciousness and purpose of the nation find in his voice no complete expression. The government entered upon the civil war in this country with the expressed intention not to abolish slavery; but the sober judgment of the future historian will set down the abolition of slavery as the great achievement of that awful conflict.

The conflict with Spain has settled beyond all question that this nation must be one of the great powers that, together, will control the destiny of the world in the coming century. And in the assertion of supremacy by a few great states is the only hope of permanent peace and order. When the smaller nations shall have become either absorbed or relegated to positions of virtual dependence, only the great nations among themselves will be able to disturb the peace of the world. These great nations will find peace, with a mutual understanding as to the method of settling difficulties, more advantageous than war; for among the great nations of fifty years hence, or even among the great nations of to-day, war to a finish or to the point of subjugation will be an impossibility. Even to-day, not anticipating the future, a war between the United States and Russia would end essentially where it began. When



the power of these and the other leading nations and their dependencies shall have been fully developed, the world will be at their disposal. There will be for them then no alternative but to revive and adopt the policy of establishing among themselves a balance of powers. What was once a European plan for preserving the peace of Europe, may, with the new prestige of arbitration, be adopted as a means for preserving the peace of the world.

As it regards the United States, the war with Spain is significant in that it has opened to the minds of the people a wider view. Living on a compact territory, removed from the necessity of learning other languages, having little intimate intercourse with foreign nations, we were running the risk of developing a certain form of provincialism. Intent on the excellencies of our government, which none of us will question, we were in danger of becoming uncharitable of the political achievements of other nations, and of developing a political bigotry to stand in our way as Spain's religious bigotry has stood in the way of her progress. As a consequence of recent events we are drawn into a larger sphere. When as a nation we impinge on the world at many points, as individuals we are interested in all of those points; and our interest leads to knowledge, our knowledge to enlarged sympathies, and enlarged sympathies are the essential basis of broad cultivation.

In the forces that extend our horizon and the range of our sympathies will be found an influence to ameliorate our internal affairs. When we have before us the serious questions that will arise through our larger contact with the world, there will of necessity be less littleness in our politics, and statesmen may arise where we now produce politicians. Details of administration will be relegated to their proper position, and remain details, and not be magnified to become issues in a national election campaign.

In the management of the affairs of our country we have shown less administrative than legislative capacity; and this is in part due to the fact that we have been

pioneers in government. We have had a state to plan and construct, and this largely without a model. This constructive work has absorbed our attention. We have passed from the making of one law to the making of another law; and in the meantime the first law has often had no one to execute it. Through the experience of these last years we have been brought into a position where this weakness of our administrative work will become especially manifest. As long as a slack administration of law involved us in no serious inconvenience, we seemed to regard our politics as an affair of a holiday. The circumstances into which we have drifted are likely to give our political activity a serious aspect, and this is a distinct gain. In dealing with our new fellow-citizens, administration will be found to be even more important than legislation. Slack administration here will be something more than an inconvenience. If tolerated, it will be a national disgrace. We are thus happily brought into a position where at least part of our government must be regarded as a serious business, in which we can afford to employ only those who are both honest and wise. This is fortunate, for we shall here have the stimulus of a possible failure. Under this stimulus, under circumstances where much depends on actions of a certain quality, I am persuaded that those actions will be performed. When it is made clear to the American people that much depends on having men of certain qualities in the public service, I am persuaded that men possessing those qualities will be brought to the front. If by the chance of war we have been placed in a position where only heroic efforts, lifting us to a much higher grade of administrative efficiency, will save us from failure and disgrace, I have sufficient confidence in the race to which we belong to be sure that such efforts will be made.

In the presence of the great national crisis through which this nation is now passing, it is necessary to remember that the conflict from which we have emerged was not brought about by any one man or any living body of men.

It was, as I have already said, a phase of the centuries-old conflict between the English and the Spanish peoples. It was set down long ago in the programme of the movement of civilization. It was involved in the antagonism of social growth and social degeneracy. If we had already fallen into the quiescent decay that marks Spain, this antagonism might not have appeared, and the conflict might have been avoided. But this nation is young and Spain is old. There is little harmony between their ideals, and the passage of time has only intensified their differences, and made more prominent the grounds of actual antagonism.

Perhaps the final and fatal struggle need not have come in this generation, but would it have been better postponed? Here we are left to the imperfect guidance of our individual judgments and whatever of prophetic vision we may possess. We might have remained behind the walls of our isolation till the world had been preëmpted by the representatives of those ideas against which the existence of this nation is a protest. This might have left us in peace to cultivate our cotton and our corn, but with a limited field for the propagation of those ideas of which we claim the world stands in need. If we believe profoundly in ourselves, we must hold that other peoples will be advanced by conforming to the ideals and practices of our life, and that it is one of the functions of this nation to be the missionary of its liberalizing spirit.

At the time of each previous extension of our borders, the movement was regarded by many persons with suspicion and alarm. They fancied in some cases that the end of the republic was at hand. Their evil forebodings filled the length and breadth of the land. For the grave responsibilities we were assuming there was apparently no adequate compensation. But their fears were not realized, and in the course of time they faded away. Opposition to the policy of the government is less vigorous to-day than it was in the earlier cases of annexation; and there is reason to think that it will disappear as completely as the earlier

opposition disappeared. Hitherto every step in our national life towards wider dominion has been a step forward and upward towards greater power and greater dignity. If we have run blindly into our present position, it is not too much to believe that the forces in our race that have thus far made for progress will lead us still, though we may not foresee the way, to the attainment of greater authority and a wider sphere of beneficent influence.

Whenever a nation rises by military or political achievements to greater political importance among the nations of the world, members of foreign nations instinctively ascribe to its learning, literature, and general culture a new and increased importance. And when a nation declines in power and loses its political prestige, there is inevitably a falling off in the world's regard for the higher elements of its civilization. This fact finds its most recent illustration in the change which came over the world's estimate of German learning and culture after the crushing victory over France, and the consolidation of the political power of the empire. Throughout the leading civilized nations, excepting France, persons of cultivation turned with an increasing zeal and in increasing numbers to the study of the German language and literature; the number of foreign students in the German universities increased; and everywhere men were eager to become familiar with the thought and ideals of the German nation. With respect to defeated France, the opposite happened. She not only lost her military and political prestige, but at the same time her learning was despised, and her cultivation was rejected as shallow and frivolous. Yet once French civilization had dominated Europe, but this was at the time when by her power she held a commanding position in political affairs. Another illustration of this idea is found in the increased estimation in which the intellectual achievements of Italy are held since the accomplishment of her great work in behalf of national unity. Applying this thought to the United States, we behold in our expanded power and

prestige a means of making our ideas current in the world. It may be true that within the limits of our ancient territory we have the means of accumulating all the wealth we need. It may be true that we have no need of much that the Orient may teach; but it is not to be supposed that the last thousand years of Oriental experience is entirely without profitable lessons for even the American nation. As the neighbor of the Chinese in the Orient, it is to be hoped that this nation may acquire somewhat of their respect for form, to ornament the strong and healthful manifestation of our spirit. If, as it regards our cultivation, or spiritual life, we have little need of the Orient, the Orient has need of us. Charity, a proper recognition of human worth, regard for woman, a determination to let justice rule, political liberty: these are some of the achievements of our race, some of the positive results of a long course of social development. Of these the Orient has need. They may be accepted by any nation without doing violence to the race ideas on which the civilization of that nation rests; and in carrying these principles of a higher civilization to the islanders of the Pacific, there is a certain excuse for our zeal, and a compensation for our responsibilities. These and other ideas for which our society stands are assumed to be worth the effort it costs to realize them in life; for it is assumed that in them is the seed of a higher civilization. That these ideas may be carried forward for the betterment of the less advanced portions of the human race, is a certain justification of the power and dominion held by the nations of English stock. Wherever the dominion of any branch of the English people has established itself hitherto a higher and progressive form of civilization has been instituted. This fact gives ground for the expectation that the inhabitants of the Philippine Islands will ultimately derive advantage from being brought under the sovereignty of the United States.

One of the important items in this advantage will consist in the fact that ultimately these islanders, if they

justify the most hopeful thoughts concerning them, will, with such limitations of suffrage as may seem expedient, have part in a great federal government, whose traditions are the traditions of freedom and toleration, and whose power will be sufficient to establish security and peace as the conditions of progress and prosperity; for the federal government is the only form of government under which widely separated communities, individually incapable of defending themselves against the machinations of great states, can be rendered secure in the enjoyment of the advantages of power and liberty. In the words of President Schurman, of the United States Philippine Commission, "our tutelage, at least for some time, is the only thing that can save the Filipinos from despotism and anarchy, and their islands from a division among the European powers, thus destroying forever the hope of a free and self-governing Filipino nationality." Under the sovereignty of the federal republic of the United States, the way is open to these islanders to become self-governing communities; and, if their development will justify it, to become, through representatives, participants in the larger affairs of the national government. Under the sovereignty of the United States, the power of the United States is in their service, to preserve internal peace and to ward off the invader; thus making possible the two most important immediate aims of social ambition, namely, the achievement of great power and the preservation of liberty.

In view of the present tendency to enlarge the extent of the dominion of certain modern states, the principle of federal organization appears to be the most effective and the most fruitful political principle of the present age. It enables the weak to share in the advantages of power. It stimulates the less advanced of the communities thus linked together to aspire to the standards of the higher. It assures freedom in all efforts that make for the higher civilization, and causes a heavy hand to be felt only where the movement is towards barbarism. It provides a way by which

the dependency may rise to practical independence without revolution. Its efficiency in furnishing a method for governing communities too widely extended for even imperial rule is emphasized by the existence of a widely entertained opinion that England's vast and varied possessions must gradually draw themselves together into the bonds of a federal union. In order to bring our influence to bear in an effective manner on Hawaii or the Philippines, it is not necessary that we should follow England as an ultimate model; on the contrary, if we make wise use of our means and our opportunities, England may find it advisable before long, in impressing upon her varied possessions the ideas of unity and nationality, to adopt the principle of federalism, and follow the lead of the federal republic of the United States.

It has been affirmed that our miserable governmental conduct in Alaska is a sufficient reason why we should never again put our hand to a similar task. Carrying this thought to its logical consequence, we might have concluded some time ago that because the school board of San Francisco appeared to be desperately corrupt, therefore we should never again attempt to maintain schools in our large cities by governmental authority. This affirms too much. Because there are weak places in our government, shall we withdraw from attempts to govern at those points? Shall we confess that our government cannot do what it ought to do, or what other governments with high ideals can do? The doing of difficult things offers the best means to acquire power and facility. English political life in the eighteenth century was mean, corrupt, and ineffective, but under the difficult tasks of the later decades, under the inspiration of the larger ideas that came with the development of her power and the extension of her dominion, the English nation has risen to be more widely influential than any other nation in spreading over the world the blessings of good government and the prospects of a higher form of social life. And there is no reason to doubt that, under a

like stimulus, the American branch of the English people may have at least an equally beneficent influence; and that along the lines of political supremacy it will carry the ideas born of our broader experience and our freer life, to establish, wherever the Americans dominate, the basis of a better social existence.



## THE "SOURCE METHOD" OF TEACHING HISTORY IN SCHOOLS.\*

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By T. W. PAGE.

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I should like to say in the very beginning that as regards the use of the so-called sources in teaching history, I heartily concur in the opinion expressed in their Report by the Committee of Seven. I am pleased to find myself in such good company in disclaiming any confidence whatever in "investigation" by pupils. Indeed, to one unfamiliar with the practices that have been growing up in some of our schools in the past decade, attempts to teach a school-boy history by what is known as the "source method" would appear absurd. "Get a true view of the past by such means," a gentleman remarked to me some days ago, "he'd as well try to get a view of co-education through the Lick Telescope, or get a view of Aguinaldo by spectrum analysis." The results attending these attempts would seem, however, to be satisfactory to those that make them. Few have turned back, at any rate, of the hardy pioneers that have undertaken to lead their pupils along this new and royal road to a knowledge of the past; many of the more timid souls, on the contrary, have determined to follow their leadership, and have forsaken the devious paths marked out by the text-books and those larger works that heretofore

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were considered serviceable. The tendency in this direction has made such headway that a certain professor at one of our middle-western universities gravely assures us that "the source method of teaching history can now no longer be avoided."

Before entering on a discussion of the pros and cons of this "unavoidable" method, I wish to ask the members of this association what they understand by "sources" of history. In my own opinion there are few things that have come down to us out of the past that cannot convey information about the time they date from. Old coins, buildings, monuments, the altered channels of rivers, cultivated fields where once a forest grew, all the marks made by the hand of man on the face of nature, the changeless features of nature itself are sources of history. The spoken language, constantly varying as it does through the advent of new words, the loss of old ones, or the altered meaning conveyed by those retained, gives aid to an understanding of a people's character, and therefore of the motives by which from time to time men have been urged. The survivals of old customs and practices, religious and social observances, deep-rooted prejudices, unconscious mannerisms,—are not these all more or less sources of history? In modern times it is from the writings of contemporaries that we have derived the most abundant information about the past—and not only from those writings that have caused or that describe the fact we wish to study, but often from those also that have no direct bearing on the fact at all and explain it only by disclosing the spirit of the age when it occurred. What historian, for example, in studying the English Revolution of 1688 could afford to neglect the "Pilgrim's Progress," or who would explain the causes of our own civil war with no allusion to "Uncle Tom's Cabin"? But abundant as this source of knowledge has now become, it cannot always be relied on. For many things that we know about the past contemporaries failed to understand; and many of the things they knew they would not tell.

Truth about a former time must often be established, therefore, through the mute testimony of facts dating from a time more recent; motives are discovered not so much from wordy professions as from actions; deep lying causes are often seen only in the light of results, to which perhaps a hundred other causes have contributed. A great source of knowledge of the past, therefore, is: a right interpretation of the facts of the present. He, for example, that knows the character of the Anglo-Saxons of to-day is better prepared to explain the expansion of England than he that has read the charters of the companies formed to exploit America and India some three hundred years ago. So innumerable, in fact, are the sources of history, so manifold in the forms they assume, so various in character, so unequal in value and in ease of interpretation, that even to classify them is impossible—unless, indeed, we divide them, as Heine did the universe, into the edible and the non-edible, and that I believe would be no great assistance, since each man must still determine for himself what is wholesome and what gives him indigestion.

Now if such are the sources of history, and if a knowledge of the past must be derived from such numerous and diverse materials, it is obviously a difficult task to acquire it. To test the genuineness of each relic that has come down to us, to interpret its meaning and then to weigh its testimony and compare it with that of others, to know what to believe and what to discard, to gather up a hundred bits of conflicting evidence, see the cause of the conflict and bring them into accord, and from the result to determine the truth, is one of the most difficult and delicate operations of the human mind. If the average school-boy were ever accused of having done this thing, I believe the average jury would acquit him.

Nor do the upholders of the "source method" expect it of him. The sources they set before him are far from being the difficult and heterogeneous mass I have described. They are much lighter and more attractive matter. You

are all familiar with them: a few photographs sometimes or other pictures of buildings, persons, costumes, or localities, more often a certain number of books containing "Select Documents of U. S. History," "American History as told by Contemporaries," "Select Charters," "American History Leaflets," "Old South Leaflets,"—in short, for the most part extracts from speeches and documents left by men contemporary with the facts that are to be studied. The "source method," then, in practice consists in trying to enable the pupil to look at persons, events, and conditions from the point of view of men that actually saw them. With the knowledge thus acquired the pupil must himself discover the bearing of one fact upon another, must trace the sequence and connection amongst them all, must recognize that evolution and organic growth in the affairs of men, a perception of which is the chief aim of historical study. To do this he needs no more text-books, no more wading through the ponderous tomes of men that have wasted their time by thinking these things out before us. Second-hand knowledge, like second-hand raiment, is to be relegated to the "old clo' man," and the pupil is to draw his knowledge fresh and sparkling from the fountain-head.

Of the many advantages claimed for this method, three stand prominently forward. First, a surer truth and a greater certainty are acquired by means of it than can be derived from a study of another man's work. In the next place, facts are more clearly and vividly seen, and are more forcibly stamped upon the mind, when the pupil digs them out for himself. And lastly, a high degree of mental culture, a development of the critical spirit, a training in "historical mindedness" is imparted by this method.

I am disposed to disallow these claims. The statement that the pupil best learns to know the truth and to know it with certainty by pursuing the source method carries with it its own refutation. It is true that few books of history have been written that are not more or less one-sided—*tendenziös*, as the Germans say—that do not so assert the

facts as to distort the fact. And it is true that this one-sidedness can most surely be corrected by an appeal to the sources. But by reason of the multitude and the difficulty of the sources the pupil cannot be left to find his way through them unaided and to derive his own conclusions. They must be arranged for him and set in order by someone else, and references must be given him to specific passages. Now what does this mean except that for the one-sidedness of the historical writer is substituted the one-sidedness of the man that arranges the references? I wish to make the statement categorically—and it may be verified by anyone that takes the trouble to review the books—that by what they omit and what they insert the best collections of the sources of American history available for school purposes have fully as strong a tendency to misrepresent facts as have the best text-books. One example will suffice to make clear what I mean. Alexander Hamilton is acknowledged to have been better acquainted with the conditions of industry and commerce in the early days of the Republic than anyone else, and it was under his guidance that our commercial policy began. He is, therefore, usually represented as having favored protection by high tariff, and his authority has been frequently appealed to in justification of the continuance of such protection at a later date. His position is clearly set forth in his celebrated Report on Manufactures of 1791; but it is not a case where he who runs may read, for the report fills many closely printed pages. Prof. Macdonald, therefore, has attempted to make this valuable "source" available for young students by giving in his collection of Select Documents extracts from it which, he asserts, "show the outline of the argument." He informs his young readers at the outset that the report is "the strongest presentation of the case for protection which has been made by any American statesman," but that part of the report which contains Hamilton's discussion of the means by which manufactures may be developed he omits altogether. Not one word is given to show that the

report severely criticizes a system of high import duties, that Hamilton regarded pecuniary bounties and premiums as the best means of encouraging manufactures, and that only in view of special and temporary conditions did he recommend even a very low protective tariff. Similar examples might be adduced from nearly all the source collections available for school use. It is, indeed, obviously impossible to reduce within a space that the school-boy can survey the vast and heterogeneous mass from which the historian derives his knowledge of the past. In the attempt to do so recourse must be had to abstracts, to outlines, and omissions; important points are taken out of their proper connection in the documents quoted, interpreted to suit the opinions of the editor, and served up in foot-notes or in fine print. Not that I have any objection to fine print for such work; the finer, the better; best of all, if it is quite out of sight! So long, then, as the source method means setting before the pupil an assortment of medicated documents, it is absurd to claim that it conveys a stricter truth than the books of trained historians; and if it does not mean the use of such material, it cannot be adopted, because the sources are too numerous and difficult for the pupil to master in the time allotted for the study by the schools.

The second claim put forth by the believers in the method has more justification. I am willing to acknowledge that many scenes and events are more graphically described by those that saw them than by later writers. There is no doubt that a student gets the clearest mental picture of past occurrences from the writings of contemporaries. But it should not be forgotten that mental pictures are not history. It was, for instance, an occurrence of far-reaching consequence when Julius Caesar on the banks of the Sambre cut to pieces the hosts of the Nervii, and I know of no writer that has given a more succinct and intelligible account of the action than Caesar himself. But of the thousands upon thousands that have formed mental pictures from a perusal of his account how many, do you

suppose, have realized the mighty significance of that great day? The truth is that "it is not the facts, but the sequence and connection of the facts that are important." To understand this sequence and connection it is of course necessary to know something about the facts themselves; and in some cases, therefore, appeals to contemporary descriptions are without doubt an advantage even to the school-boy. But it is just this sequence and connection of facts—which is what we really mean by history—that contemporaries cannot give us, and a knowledge of which the source method fails to impart. For this reason I cannot agree with an advocate of the method who recommends to us what he calls "remnants, fragments, oddments from rich and genuine goods;" for, he says, "if they be pieced together with knowledge and skill, it is remarkable what unity of design the garment can be made to show." Such a patchwork garment, I believe, would hardly be in fashion at the present day. Indeed, my reading has brought to my notice only one man who in my opinion could have appropriately worn it. Martinus Scriblerus pointed out a way by which the ancient Nurembergers were to make a wood and leather man who, he said, could eat and digest, and, "could reason as well as most country parsons." But the wood and leather man has fallen into decay; and even of the country parsons I have known, some were dissatisfied with mere oddments and fragments of rich and genuine apparel.

But, urge the advocates of this patchwork process, it is precisely to raise the pupil above the level of the wood and leather man, to develop his mind and teach him to reason that we uphold this method. You should not do for the student, they tell us, what the student can do for himself. You are to set before him the materials from which he may learn the facts, and then let him improve his mind by discovering the sequence and connection of the facts for himself. For, "the process which gives outright answers without requiring investigation and solution, like a key in

arithmetic, is not an educational process." "History," it is proudly added, "is now studied as a problem, and not as mere literature or engaging narrative; and even a limited use of the source material makes of the student a discoverer and a producer."

Now, in my opinion, the patchworkers are wrong here. It is impossible for the student to become a discoverer or producer from the limited amount of source materials that he can use at school. Generalizations based upon the few facts that he can master in this way can be right only by accident. And, indeed, many important generalizations he will not reach at all, because the information upon which they must be based it is out of his power to interpret. I am confident that the Dred Scott Decision, for example, with its allusions to demurrers, to pleas in bar and pleas in abatement, its abstruse discussions and difficult chain of reasoning, would become intelligible in a reasonable length of time to the average pupil of no school in this State. The teacher that sets his pupils to acquire a knowledge of the past through the use of such documents, makes of history a problem indeed—such a problem as it is impossible for them to solve. Moreover, it is an entire mistake to treat history and mathematics alike, and to use the two sciences to develop the same powers in the pupil. One cannot start with a few axioms in history and by patient industry in a quiet corner of the study-hall work out for one's self the progress of civilization. History is largely an inductive science, and its generalizations must be based upon a knowledge of many facts. Observation, therefore, is the mental power of prime importance in the student of it, and I hold that he that develops the power and the habit of intelligent observation in his pupils has done them as much service as he that teaches them mathematics. The field, too, is vast, and the facts to be known innumerable; so that the teacher that, under the guise of a mind trainer, involves those facts in obscurity, and makes the learning of them unnecessarily difficult, is a traitor to the science he



professes to serve. After observation, and dependent upon it, comes the power of systematizing and arranging, of seeing facts in their proper perspective, of noting cause and effect, of organizing the accumulated information so as to set forth the structure and see the growth or decay of what we call civilization. Now, it is precisely this power which it is claimed the old-fashioned text-book method fails to cultivate; when the pupil finds all this work done for him he brings into play only his memory, and the habit of historical thinking fails to develop. The point is well taken, and I freely acknowledge that if the work of the pupil is confined to a text-book, the best form of mental culture is not attained. I will make the further concession that if the material for study were adequate and the time at his disposal sufficient, and if a competent teacher were at hand to point out mistakes in his conclusions, the pupil could be set to no work better adapted to cultivate the power in question. But the material provided by the schools is not adequate, and if it were, the time allowed for the study of it is not sufficient. Insistence, therefore, on this method of work will prevent the pupil from acquiring that broad grasp of facts necessary to an insight into the leading movements and dominant tendencies in the biography of mankind, and will cultivate in him nothing better than a spirit of miserable pedantry and muddle away whatever sense of proportion nature has given him. At the same time, it is neither necessary nor right to confine the pupil to the old-fashioned text-book, which has too often merited the contempt into which it seems to have fallen. Teach him to read widely in the books of thoughtful writers, especially of those that present the same subject from different points of view. Teach him to follow closely their line of reasoning and to note the arguments on which their opinions are based. Show him how to test the validity of their conclusions by occasional appeals to the sources—not for the purpose of discovering new truths himself, but of learning the process by which a historian should work.

Encourage him to discuss and compare in class the opinions he has imbibed; show him what to reject and what to retain; make sure above all that he does not miss that "sequence and connection" that will distinguish his knowledge from the patchwork garment of a man of wood and leather; and then—leave the rest to the university.

This claim that the source method of teaching history is the best way to use the science for the purpose of mind training illustrates what threatens to become a very dangerous practice in our schools. I refer to the tendency to subordinate everything to the effort to cultivate the pupil's power of deductive reasoning—for that too often is what our new methods of pedagogy as practiced in the schools really amount to. The giving of information, we are told, the stuffing of the mind with facts, should not be the object of the educator, since it only exercises the memory; mental power is what he should seek to impart. As if the memory were not a mental power, and as if there could be any kind of mental power without mental contents for that power to act on! I am far from reprobating attempts to develop a pupil's mind in a wholesome way, and I honor and sympathize with many opinions held by the teachers of pedagogy. But the science, as it now stands, has all the fascination as well as some of the incompleteness due to novelty, and it has been represented in recent years by a number of active and enthusiastic men. Many of our teachers, therefore, have been induced to accept its conclusions without understanding their full meaning, and in putting them in practice they have exaggerated the importance of some at the expense of others. I heard a man prominent in pedagogical circles some time ago say that if all a pupil had learnt at school could be erased from his mind like figures from a blackboard, the object of his education would still have been attained in the increase of mental vigor he would have received. This statement is false, and its plausibility makes it dangerous. It is true that mental vigor is not only a good thing, but an indispensable thing

for the highest success in life. But it is not the only thing, and the failure to realize that it was not the only thing delayed the progress of civilization for the space of a thousand years. For it was a principle that developed in the early Middle Ages and lived on through the period of scholasticism—an 'ism that produced some of the ablest but least productive minds that the world has seen—until Lord Bacon showed its falsity. A strong mind is a necessary thing, and a close reasoner has an advantage; but "knowledge is power," Bacon said; and his saying is just as true now as it was when he revolutionized pedagogy by uttering it. It is no mere coincidence that in the early Germanic languages the words for knowing and being able—the English *to ken* and *to can*, the German *kennen* and *können*—were identical; it shows the recognition by the primitive peoples that spoke those tongues of a truth that the Middle Ages suffered by losing. The tendency thus to emphasize mind-training and to underrate information is a mere harking back to scholasticism, and I am sure it is as dangerous as it seems to be popular. As applied to the study of history, the principle was given wide currency by Lord Acton when he said in his inaugural at Cambridge some years ago that this study "fulfils its purpose, if it gives us the gift of historical thinking, which is better than historical learning." I am sorry to see this idea repeated in the Report of the Committee of Seven, where it is said that "not an accumulation of information, but the habit of correct thinking" should be the main object of the teacher. These are half truths that tend rather to mislead than to assist. For how can there be historical thinking without historical learning, or correct thinking without a store of information? The nation that has produced the greatest number of great historians in the present century is Germany; and I can testify from my own observation that the so-called historical-mindedness of the average university student is greater in that country than in ours. Surely, then, if methods are to be judged by their results, the

German method must be allowed to be a good one. That method, according to an American professor who has watched it carefully, so far from being the source method, consists throughout the school period of pure narrative, shading in the later years into what resembles the college lecture, supplemented by the use of a text-book containing the barest outline of events. I see no reason why the American mind needs more constant attention than the German. It has hitherto been our boast, and foreigners have conceded that it is well-founded, that for mental alertness and quickness of apprehension, for native vigor of thought and freedom in selecting and grasping the salient features of a subject—in other words, for what is commonly called "horse sense"—the American youth surpassed all others. I protest, therefore, against prostituting every science taught in our schools to a mere attendance on pedagogy. Some modicum of mind in a pupil it is the duty of a good school to presuppose. For those wood and leather intellects that must be painfully trained into exhibiting some show of human reason, this State maintains, I am told, a special institution at Glen Ellen, and it is right that we should give the officials there a chance to earn their pay.

## THE AVAILABILITY OF PHYSICS.\*

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By FREDERICK SLATE.

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This subject has been chosen with a definite aim of at least suggesting some ideas that are of general application by those who regard the profession of teaching thoughtfully; and it will be seen to lead towards the perennial question of the school-programme. The occurrence of the word Physics in the heading marks only the particular line of approach to some general conclusions, and the quarter in which I desire especially to drive them home.

In conformity with the wholesome practice of defining the terms that are used, let us emphasize the word "Availability" with some necessary comment. This term is employed to convey the notion of general serviceableness for the purposes of education in the schools. I will offer you the first clue to my present intention, by announcing as a thought of central importance for us on this occasion, that such serviceableness is a quality to be estimated *practically*, and under conditions actually prevailing, as a *composite result*. As might naturally be expected, an estimate of this character will not usually agree with the premature conclusions of any incomplete theory. And this feature in the situation justifies the conservative sentiment in our communities, with its reluctance to adopt views that are novel, but one-sided and unproved.

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\*An address delivered at Los Angeles, before the Teachers' Institute for the City and County.

The many questions which are involved in drawing up the programmes for school-work are not yet settled, even to the extent that would secure concerted action in any large section of the country. But progress can be reported in clarifying our thought upon these matters, and disentangling the separate issues which have presented themselves in such a form as to cause mental confusion. Through the various Committee Reports that have at once stimulated public discussion and incorporated its important results, we seem to be making a spiral sort of approach towards a settlement, circling many times about the center before we arrive there. To my thinking it constitutes a distinct step along the proper path that will lead to permanent gain, to recognize as a fact that a decision to include or to exclude any particular study, in relation to the school-programme, must be an affair of applying—not a single criterion but several—and setting off the favorable judgments against those which are less favorable, if that be necessary.

This may sound like a very commonplace truism. If it does, that is a good sign; for the recognition spoken of above has not always been present to be counted upon. At times within the memory of the older ones of us at least, we have had urged upon our attention some exclusive touchstones by which to try the true gold; the material good for the training of youth; and some of these ideas have been backed with the weighty influence of a system of philosophy. We have many of us lived through a disturbed period when discussions were prevailing on educational values; intrinsic values, that is, to be adjudged according to the content of the subject, and its presumed influence in cultivating mental power. Such discussions were apt to be largely theoretical in tone; they exhibited aggressive bias, and were on the whole lacking in candor. On the one side the contention was that there should be preferred studies, with conceded first place and right of way; or at the other extreme, all studies were to be rated as equal, and indiscriminately open to personal choice. If we may

be allowed to characterize each view by the epithets current in the opposing camp, as being more picturesque if less accurate than the truth; the country was called upon to choose between rank individualism and anarchy in education, on one side; and on the other, the claims of an arrogant oligarchy, entrenched in tradition, but lacking other distinctive merit. It is our good fortune to live under a clearer and serener sky.

In these later days, however, our attention has been turned in another direction; we have come to hear much of the adolescent, and of child-study. Wide-ranging and serious investigation has been devoted to certain aspects of psychology; a thing unknown in the days of our forefathers; and new grounds for judgment have in consequence been placed at our disposal. The processes of the schools have been analyzed from this point of view. The constituents of our school-curricula have been weighed in the psychological balance—and have been found wanting to a degree that is disquieting in some quarters, as we all have good occasion to know.

Again, as a third example of an inclination to judge the issues from one side only, there have been missionaries in the field in the interest of some particular method. As a rather natural consequence of promoting science from the ranks to what may be termed the dignity of office, the inductive method (so-called) was for a time thought to be of more nearly universal application than would now be conceded by cooler judgment. The insistence upon the "naturalness" of the method, as though it were one of self-education by a process of rediscovery, was quickly seen to be a false emphasis; for the schemes of education are of necessity artificial; how otherwise could the individual so rapidly appropriate the knowledge accumulated through centuries of effort? The gospel of procedure by induction and rediscovery was indeed preached as a remedy for much that was going wrong in the world of education; but this light did not brighten into the dawn of a universal religion.

Finally, to conclude my short list of instances, I have heard a distinguished iconoclast maintain that subject, and psychological adaptation, and individual bent, and method, are all subordinate elements, dominated by the quality of inspiration in the teacher, who can thus make any subject the best to choose in a given case, irrespective of all else. Suppose that we grant this within reasonable limits, where one teacher shows preëminent merit. We should still need some basis for decision in the more usual case where the teaching is nearly equal in quality.

There is no need to dwell further upon other transient or partial aspects of these matters. It should however be distinctly said, before we proceed, that while I am not especially a "*laudator temporis acti*," I would nevertheless urge the full recognition of value in every earlier contribution towards our present store of clearer thought. All the instances which have been cited were selected solely for their representative character; and with no intention whatever looking towards ridicule or slur or insinuation. It is quite natural, and in parallel with other striking cases, that a complex situation should be preceived in its details, before it is grasped comprehensively. At this point, let us remind ourselves of our thesis, in order to preserve the thread of connection in the thought. This is, that the availability or serviceableness for school purposes of a given study is to be determined by nothing short of a discussion which shall include and take cognizance of every weighty consideration that can be brought to bear from any side. A view in proper perspective of these many detail encounters must suggest to us a larger plan of campaign. As a first attempt towards a summary, let us say that in order to arrive at a conclusion that shall be valid, about any branch of study, as regards availability, we must take into account at least the five following elements, named without prejudice to their comparative importance:

- (1) Its intrinsic merit depending upon content and disciplinary quality—in so far as such values can be established.



(2) Its adaptation to the psychological conditions peculiar to the age at which it is taught—in so far as those have been discovered.

(3) Its methods and scope; to what extent these have been practically ascertained and adjusted to school conditions.

(4) Its teachers; what quality of instruction is to be expected of them, in view of their training and equipment for their work.

(5) Its relation to preparation for intelligent citizenship and community life in a democracy.

To assign due weight to each of these factors, and to attain to a just judgment, is no easy task at its best. Nor can any such judgment be final, for the position of balance must be continually shifting, as development and research push forward the frontier of positive knowledge on the points involved, along one line or another; and the requirements change, that the environment makes upon the individual.

To be made more fully aware of the hidden complexities of the situation is the price paid for acquiring the weapons of scientific attack upon the problems of education. But no good end would be gained by conceiving any such task as simpler than it really is—except perhaps that of avoiding discouragement in grappling with it. And progress enough of a certain kind has already been made, to obviate any widespread danger in that direction. For if any were inclined to appeal to existent divergencies of opinion on standards in these matters, as testimony that further general discussion of them is hopeless or unprofitable, they might be invited to look in the other direction along the different lines of treatment, and notice them running towards convergence. For, in the final outcome, whatever is true—though partial—will stand, and the separate threads will be combined into one strand which contains them all. Meanwhile, the nature of the very difficulties to be faced gives dignity and seriousness to the science of

pedagogy, and offers encouragement to men and women of ability to adopt teaching as a career.

If this view of the case is essentially the right one, we have before us, in the construction of school programmes, another instance of matters in which conscious reflection and analysis by scientific method will finally supersede the cruder process of regulating practice by the empirical plan of trial and error. At the same time there will be a clear gain in confessing—provided that be the truth—that our theoretic knowledge has not yet reached the point where it can assume full direction of our practice. In that case we may expect that it will only supplement and link together the lessons of experience; it will, to a certain extent, explain why the observed facts are as they prove to be, and contribute its suggestions for our guidance. We may acknowledge, without hesitation, that our insight is incomplete in the sphere of mental and moral growth and activity, bristling as that is with difficulties. It is no disparagement of those who contend for the laying of deep foundations, to notice that the building to arise on them is not yet finished. And in their interest we may note, as a cause for congratulation, how the dangerous movement has been resisted and defeated, which baldly attempted to cut the root of all wise effort, by assuming either that there is no problem in the organization and sequence of school studies, on the ground that these are matters of indifference, or that, granting there is a problem, it is unprofitable to seek its solution because of the insuperable difficulties.

It is no unusual sensation, I suppose, to feel that we are buoyed up and sustained in many trying individual experiences, by the reflection that they are undergone in common with our fellows. So we, as workers in the pedagogic field, may take heart amid our uncertainties on finding that we have our trials in common with the physicist, of whose predicament I can, of course, speak at first hand. I do not know in how far the belief is general which a young lady once expressed to me, to the effect that natural

science cannot be interesting, because everything has already been discovered, and nothing is left to give zest to the investigator's efforts. Probably a juster view than that prevails, and we are aware that the physicist does not yet claim to be able to reconstruct, even in imagination, the actual mechanism of the magnetic field, which is utilized in every dynamo and electric motor. But the dynamo, nevertheless, runs; while practice and theory, by mutual helpful reaction, are bringing us progressively towards completer mastery of the conditions of excellence. The science of physics registers carefully all that has been ascertained concerning these matters, notes the questions that are still open, and watches while the work goes on, for any additional crumb of information, or crevice for the gaining of insight, which the processes of nature may offer while they are in operation. Those who are concerned with the direction of education may, with profit, parallel the procedure of the physicist under the conditions described above. Since that is an every-day necessity, the training of children, according to the best practice that we know as the result of intelligent comparison, must go on. Doubtless this can be accomplished with increasing excellence, as psychology succeeds in explaining the mysteries of mind and character, and especially of these in their unfolding. In the future this science may become able to furnish a complete account of the individual, and his reactions under the stimulus of environment, including the influence of school-training. In the interim, there should be a wise mingling of experience gathered in the schoolroom, with the leaven of suggestion afforded by lines of investigation more newly opened. And again, as in the case of physics, the mutual and helpful reaction cannot fail to appear, between ascertained data, and their interpretation from a general point of view.

This rather ample preface finds its explanation and apology, as I hope, in the general significance of the position which it announces, and in the circumstance that it

opens the way to treat our more special topic with the greater ease and brevity, by laying out the lines of a helpful analysis.

When we come to the point of examining the availability of physics, the conclusions that we may see our way to draw will be in large measure determined by the answers in detail to the five questions which have been formulated already. I shall remind you of those questions by repeating them in succession as they come up for answer. But before proceeding to do that, one postulate should be stated candidly, which I assume as fundamental in any construction of programmes for the public school system. It may, of course, find only partial acceptance at your hands; and, as a consequence, you may be more or less skeptical in regard to what follows. But on an occasion like this we must assume some things without argument, either because we accept them as points of fundamental divergence, or because we want to secure the opportunity to test them in their corollaries. At any rate, here is the postulate: That our programmes should, on the whole, offer practically equal opportunities in five main lines of study; to-wit, (1) English; (2) Mathematics; (3) History; (4) Natural science; (5) Foreign languages. We may not be in a position to prophesy what revision of this list future developments and discoveries will render advisable. Neither does it need to be defended as a logical or exhaustive classification, on the basis of either content or method; for on that score its separations are not complete. But as a provisional rule to work by, it was plainly foreshadowed in President Eliot's inaugural thirty years ago; it has been repeated in equivalent forms at intervals; and it stands in the important report which we have all been reading this year. It seems to embody the commonsense of the matter, and it serves a present purpose by implying that necessary comparisons of availability may be restricted to items under the same main heading.

We have then reached the point of stating the first

question: (1) To what extent have the methods and scope of physics been ascertained in adjustment to school conditions? This is really a shrewd, practical query. As President Hadley pertinently said in his recent inaugural address, only those things should be taught in the schools which they can *do well*. We cannot look to theoretical considerations alone for decision here; there must be practical evidences of ripeness for the duty. A subject will not, in general, be fitted for inclusion in the standard plans of education until such evidence can be furnished. The responsibility for maturing methods, and working out clear thought as to scope, must finally rest with those directly interested in developing the latent possibilities of a subject: *i.e.*, the workers in it. For example, if comparison in this respect had been made fifteen years ago, chemistry would have been found in a position of advantage over physics. If one science had been selected then on the ground of preparedness to meet these requirements, chemistry should have been (and quite often was) that one. At the present day conditions have changed. The chemists seem somewhat in doubt for the schools, as to the scope at least, if not the method, of the appropriate instruction. Three different aims prevail; with a difference seemingly resting on irresolution, rather than on clearly conceived parallel choices. But, meanwhile, the teaching in physics has been steadily gaining in unity and clean-cut purpose.

Another instance can be found in the teaching of English. With everybody in practical agreement that this language of a rich literature—and our own vernacular, moreover—is a subject in all respects adapted to fill a central position and receive strong emphasis, the day of realization for the hope and desire was postponed, because it took time to work out the teaching methods, and delimit properly the boundaries of the instruction. At this date, however, we all owe our tribute of congratulation to the English departments of our schools upon the success to which they have finally attained.

On this first score, as has already been implied, there is no cause for uneasiness about physics. This is not just the place to make good the claim with any elaboration; I assume that its justice is sufficiently well recognized in the quarters where it needs to be appreciated. But I do desire to direct attention, for every subject on the school programme, to the necessity of conscious effort in this direction, continually renewed.

The second question reads: (2) What quality of instruction are we to expect, in physics, in view of the training and equipment of its teachers? The praise to be given to the spirit with which they approach their task should not be stinted. The rate of improvement has been, and is, rapid. What qualification there is to be made may be expressed in the form of a wish, that the near future will doubtless see fulfilled. It is this: That no person be found teaching physics in the schools who has not made special preparation to undertake the work. To be sure, there is noticeable progress to report under this head also. It lies within the limits of my experience in this State, that physics was generally assigned to the teacher who either had least to do, or was least inclined to resent an extra burden. But men and women equipped with the results of college study of the subject have gone into the schools; and teachers have gone back to the beginnings in Summer Courses, bringing earnest purpose and a maturity that seized the essentials quickly; until perhaps half the number of schools has been provided for adequately. But we are looking covetously forward towards the position of advantage occupied by the teacher of ancient languages, with six or more years of special training, in the average case. The consoling thought is that the best sets the standard for all. To equal the preparation of the Latin teacher is the goal in sight. It is fair to give warning that when that goal is reached we intend to make other departments look to their laurels, if they mean still to wear them. At least we may hope to repay to the Latin teacher the uplift given by his

example, with the encouraging model of flexible, vigorous life in the science departments; if, perchance, the older traditions of our neighbors may be found tending to stiffness and rigidity. This recurrent note—that there is to be generous, competitive rivalry in school matters, with possible readjustment according to results—is intended to catch the ear.

The sciences are not alone in the disadvantage which arises from an inadequate supply of such college graduates as have enjoyed the opportunities of special preparation. The modern foreign languages, I am inclined to think, stand in the same shadow. A title to equal right with the ancient languages has been claimed for them upon the school programme; perhaps it has been made good. But it is one happy feature of the point of view that you are adopting, for the moment at least, if you follow me, that abstract right or equality is of small value unless coined into actual and testable equality in operation; *i.e.*, into availability. French and German have on some sides unfortunate antecedents. First, they have lived in compromising society, among the "accomplishments" taught in a certain class of schools. Secondly, the colleges even have set good standards of attainment in these modern languages so recently that the full effect upon the schools has not been transmitted through the college graduates who are teachers in this department. And thirdly, there is the intrinsic difficulty that the requirement of living for a time where the language is the vernacular is not easy to fulfill; yet it is often insisted upon as a prerequisite of good teaching.

This doctrine of non-recognition until development has been attained may sound dangerously like not being allowed to bathe, unless swimming is a known art. But of course there are instances under observation, some of which have been mentioned, which show how the different phases of progress dissolve one into another, in the practical situation.

We are now ready for the third question. This is:

(3) In what relation does physics stand to intelligent citizenship and community life in a democracy? Such preparation in the public schools is on the whole indirect; or potential, if that word sounds better; if we bar such subjects as civics, and the closer lessons of history. Systematic exercise of the mind upon any subject (within a wide range) is calculated to give that intelligent outlook which frees from the fetters of the political quack, and educates capacity for detecting the fallacies of the stump speaker and the party organ; while all difficulties, when honestly faced and overcome, tend to steady the will, and give backbone to character. But without being a believer in the extreme idea that particular mental activities and special influences upon character are bottled off separately in the subjects, still my personal experience leads me to accept the position, that some faculties are prominently exercised in subjects that can be specified. And prolonged contact with young people writes the lesson deeper every year, that readiness in action is a matter of habit, as well as of capacity. In other words, the material needs to be familiar, as well as the mental process, if the mind is to work easily and without serious constraint. In order to secure this familiarity in many directions, the material of the school education should be representative of the phenomena of life, in the broadest sense. Inasmuch as the thought of physics embraces no inconsiderable share of our recorded success in the endeavor to come to intelligent understanding of the world about us, it were not well to leave this region blank in our education, and trust to a process of irradiation to light up these dark places in the kingdom of knowledge. This is a fundamental reason in its broad statement. There are others of narrower scope, insisting on the educative influence of following chains of cause and effect. There are again others more subtle in character, contending for wide range of interest with the pursuits of men, as likely to retard the development of caste feeling. Combining the suggestions from all these



sides, it will be found, I think, that physics stands on a very firm footing. It certainly contributes to breadth of view, by stimulating wider interests, which again do not exist apart from knowledge.

The remaining questions may be summed up in this one:

(4) The intrinsic merit of physics depending on content and disciplinary quality, and its psychological adaptation; what can be said of them? Perhaps the very best course is to walk warily away from snares and pitfalls, and say very little about these elements, especially in comparison with possible alternatives for physics. Indeed, I have already in part abdicated the seat of judgment in what has previously been said. But one may remain within the limits prescribed by wholesome caution, and yet mention several suggestions coming from these lines of investigation; all of which speak for, and none against, the result otherwise reached. I am assured, by friends who appear to know, that there is good pedagogic value in the content; for it gives intelligent connection and rational explanation to phenomena that appear disconnected. I hear from another quarter, that it affords to the pupils an exercise in reasoning, in which their conclusions can be at once put to the test of comparison with objective fact; while the experimental work has a quantitative character sufficiently rigorous to guarantee mental discipline. And finally comfort comes from the side of psychology. For I am informed that, in the adolescent stage, there are yearnings for general formulations including known facts, combined with pleasure in speculating vaguely on the unknown, and admiration for disinterested pursuits. I recognize in this description an aptitude for assimilating the empirical laws of physics; a propensity to find satisfaction rather than discouragement in contemplating the wide ranges yet unsubdued by theoretical insight; and a possible kindling of enthusiasm for the lives of men of genius, who have given themselves disinterestedly to the pursuit of their chosen science. And I feel relieved that my previously

recorded view of what physics aims to accomplish in the schools, presupposes no other psychological attitude than this.

Without going further into detail, for which time would be short, is it not fair to conclude that physics makes a fair showing of availability? It meets the practical tests of being serviceable, and finds no contradictions of which I am aware, among the beginnings of contributions, which the newer lines of investigation are placing at our disposal.

Voluntarily, and not under challenge, this statement of its case can be made for physics, in answer to the question: "Why should physics occupy the place conceded to it?" Let it be remarked, concerning this selection of an example, first, that it shows how discrimination may find a base on which to stand, apart from issues still in dispute. Secondly, that it eliminates the disadvantage of advocating claims which expert opinion has not yet ratified; and pleading a cause whose merits are still in question. The desirableness of physics has been recognized unequivocally; not alone in California, where the conditions are peculiarly favorable because the influence of the University has been wielded in its behalf; but everywhere in the country, as there is abundant evidence to prove. And thirdly, that physics being one of the studies in whose favor the scope of school-work has been recently extended, it stands without much support from mere tradition, close alliance with which has, I fear, been damaging to the ancient languages.

I have dwelt upon the instance closest to me, in order that other candidates for "Equality in academic rank," as President Eliot's phrase runs, may understand this to be the kind of equality with which we are familiar in the Constitution of the United States. It is a chance given to all to prove themselves the equals of the best. And while the chosen list of subjects for the schools will be selected among the "best intellectual and moral materials of their day," in the twentieth century as in the fifteenth, the practical choice will always be restricted to those provinces of

knowledge that have been worked up into shape for such daily use and service.

The question as stated above was: Why *should* physics occupy its place? We might change the form of question, asking: Why *does* physics occupy its present place? The same answer does not fit both forms of question. As a matter of fact, my own answers would be in some respects different. How is this to be understood? you will say. Well, the explanation lies very near the surface; for no very wide experience in life is needed, before we become prepared to find the right outward act done by the impulse of the wrong motive, or one lower than the best assignable. It may indeed be regarded as a beneficent provision, that the best things have some qualities which recommend them to the popular favor, in addition to their highest attributes, in virtue of which they are "best." It is claimed for good music and good literature that this is true of them. And according to my observation it is true of physics that its every-day applications; the contributions which discoveries within its bounds have made to the convenience of mankind; have won the ear of the people. There is no difficulty at the present day in securing sympathetic appreciation for a science whose practical fruits are omnipresent in the extended commercial applications of electricity. But you may have observed that no particular mention was made of these elements, in my attempted justification of the esteem in which physics is held in educational circles. For the ultimate test of fitness in physics for the purposes here in question is not to be met by showing that the science is a handmaid to the useful arts. The aims of the ordinary public schools are not technical; every subject taught in them should be freighted with liberalizing influence; and the wisest friends of physics will be apt to insist most strongly upon the refusal to conceive it narrowly. Temporary support may indeed be derived from appeals to cruder utilitarian notions; but such elements are evanescent. This lesson I have taken to heart, and I urge its

consequences upon my friends; those, for example, who may be inclined to base their advocacy of modern foreign languages in schools mainly upon the utility of speaking them. Experience should convince us that the promotion of any subject towards an assigned position of prime importance in school work will be vitally associated with clear insight into its highest possibilities, and the broadest conception of it. Which statement is not to be interpreted as though it had been declared that we must disregard all secondary benefits, when they occur in association with their betters.

The line of remark which I have just concluded tends towards rectifying one popular misconception. There is another idea current which makes an assumption narrower than the truth, upon which I should like to spend a few words before closing. But I must prepare the way by a short explanation.

We know that the list of school studies at one time included three items only—Latin, Greek, and mathematics. The list has been lengthened by successive additions. I will not write it, because there might be difference of opinion as to where it breaks off, which would distract thought from my present purpose. But it is clear that among the unquestioned items of the list as now current, there are some, like English, which are downright extensions, with no previous equivalent; and there are others, like German, the very burden of whose claim is that they, too, are philological, and a complete equivalent or alternative for Latin or Greek. Whether that is just exactly true or not, is also a side issue at this moment. But I raise a question which seems to be one of great importance and pertinence, and yet thus far to have been overlooked, if we may judge by the external signs. The question is: Under which heading shall we place physics? To be sure the answer is apt to come readily: "Under the first, of course; it introduces the experimental method into the circle; its material is new; there was nothing like it before." Much of this I

should be inclined to admit. But at the same time it is not clear that this view includes all that is instructive in the situation.

In arraying the modern against the traditional, the classic languages have had to bear the brunt of a twofold comparison. First, within their own field, with French and German. Secondly, they have had opposed to them, or set in balance against them, the natural sciences. It has been the ancient against the modern; the formal against the concrete; the useless against the practical. Of course I do not mean to endorse these suppositions; I mention them only as occurrences. Meanwhile the third member of the original triad holds its way unchallenged; even strikes up an alliance with the intrusive sciences; and, in part under the shelter of their protection, we find mathematics in the schools adding the analytical intricacies of algebra to the synthetic difficulties of geometry, and capping them with trigonometry on utilitarian grounds. But mathematics may be dubbed ancient, and formal, and useless, as well as Latin or Greek. In the interest of fairness (and more seriously than the tone of these later remarks might seem to imply) I seek to submit that mathematics should share these epithets, opprobrious by intention no doubt, if they are to be used at all. I also seem to see the way open to restore complete balance in the situation, by suggesting an alternative for at least part of the mathematics now insisted upon. Some pages back, I spoke of a readjustment of availability that has happened between physics and chemistry. I am now venturesome enough to put forward another possible readjustment that should be inquired into—and made, if upon examination it seems wise. It is one that would affect the relative importance attributed to algebra, leaving the plane geometry of Euclid undisturbed in its unique position. It may be expected, perhaps, that I shall propose here to occupy with physics any territory that may be relinquished by algebra. If this is proposed at all, it is certainly not with any dogmatism; and not

without nominating history as another alternative that should receive our closest consideration.

I remember the saying of a wise man—himself a great mathematician—that a premature contact with abstractions dulls the intellect. The more advanced portions of school-algebra are surely abstractions. So far as my observation of results extends, these abstractions are introduced prematurely at the high-school stage. The argument based on the cultivation of the reasoning powers by mathematics is met by the reply "that it is a very peculiar kind of reasoning which is used in mathematics; a kind we seldom use in the actual world. Mathematics deals with certainties and demonstrations."\* After the preliminary study of geometry, with its simplified logic, may it not be better to follow it with that other type of reasoning, in which premises have to be disentangled among phenomena, and conclusions are reached by a convergence of probabilities? Physics offers such a field—of simplified reasoning—the students' results being immediately comparable with fact. History is also human and concrete—its lines of reasoning being more complex.

Many of us sympathize with the agitation in favor of curtailing the time spent upon arithmetic. Shall we not do wisely to revise in the matter of algebra also? Personally I cannot defend the extent to which this subject is *required* in the schools.

I have kept this radical proposition till the last, in order that I might not startle your attention away from my main theme; and I conclude, commending it to your thought.

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\* Eliot, *Educational Reform*, p. 186.

## IN MEMORIAM.

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HON. J. WEST MARTIN.

At a meeting of the Regents of the University, held December 12, 1899, the following memorial of the Hon. J. West Martin, late Regent of the University of California, was read and adopted:

WHEREAS, Hon. J. West Martin, who had been a Regent of the University of California for more than a quarter of a century, has been removed from among us by the hand of death,

*Therefore, be it resolved* by the Board of Regents of the University of California, that in the passing away of our fellow Regent, endeared to us all by his manly and noble simplicity, his civil and affectionate courtesy, his self-sacrificing, ever-watchful duty exercised in the best interests of all connected with our beloved University, and the possession on his part of all those qualities of head and heart that are to be found exemplified in a refined gentleman and true citizen, we recognize that a loss has been sustained, hard indeed to bear, by his country, his friends, and his family.

*Resolved*, further, that a copy of these resolutions, expressing as they do but feebly the deep affection and respect which this Board of Regents now entertains, and ever has entertained for our beloved brother, be spread upon the minutes of this Board, and inserted in the UNIVERSITY CHRONICLE, and that an engrossed copy of the same be sent by the Secretary to the devoted and well-beloved companion of nearly half a century of his life, Mrs. Jane Foote Martin, we intending by this to evidence

our respect for her, and begging to soothe, if we can, her sorrow, by all the tender sympathy of which loving hearts are capable.

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HARRY HERBERT HIRST.

After an illness of more than two years' duration, Harry Herbert Hirst died at the home of his mother, in San Francisco, on the evening of December 23, 1899, at 7:30 o'clock. He was the elder son of Rolandus P. Hirst and Maria Theresa Teas Hirst, of Yreka, Siskiyou County, California, where he was born May 1, 1873. He was prepared for admission to the University of California at the Cheney High School and the San Francisco Boys' High School. Before entering the University he had been a member of the Southern Pacific Company's engineering corps, and had also been engaged in other engineering field work. He was registered as a student of civil engineering on August 22, 1892. Very early in his university career he took a prominent place in his class as a scholar and leader, and became noted for his intellectual gifts, capacity for work, and high rank as a student; as well as for his gentlemanly character, genial disposition, fair-minded judgment, and lively interest in all matters pertaining to college life. He became an influential member of the Sigma Nu Fraternity, president of his class, and also president of the Associated Students. He was an active force in the social life of his adopted home, a leading player in the Junior farce staged by his class, and an important member of the university dramatic society. In 1896 he was graduated with the degree of B.S. from the College of Civil Engineering, and was awarded the University medal, annually bestowed upon "the most distinguished graduate of each year." His ability and skill in surveying won for him, in August, 1895, while still an undergraduate, the appointment by the Board of Regents as Assistant in Surveying Field Practice. In May, 1896, he was appointed Assistant, and in May, 1898, Instructor in the Department of Civil Engineering. The



last-named appointment he held at the time of his death; although, on account of ill health, he had been granted a year's leave of absence, dating from September 1, 1899. He possessed a most winning personality, a manly and generous spirit, and an exceptionally strong and original mind. His talents, character, and disposition commanded the love and esteem of all who knew him.

FRANK SOULE.

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### OFFICIAL ACTION.

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At a meeting of the Regents of the University, held December 12, 1899, the following resolutions were adopted:

*Resolved*, that Article 438 of the MANUAL of the Board of Regents of the University of California be amended so as to read as follows:

Whenever a leave of absence is granted to any professor, associate professor, or assistant professor of the University now or hereafter receiving a salary for his services, such salary shall, upon the recommendation of the President and the approval of the Board of Regents, be paid ordinarily at the rate of two-thirds of said salary during the absence of such professor, but not for more than one year in seven in service; provided, however, that in the cases of those who at the date of the adoption of this amended rule are professors in the University and have not yet enjoyed the privilege of a year's absence on full pay the first leave of absence granted may be with full pay.

*Resolved*, that Article 439 of the MANUAL of the Board of Regents of the University of California be amended so as to read as follows:

No salary or compensation shall be paid to professors, instructors, or employees unless actively employed in some department of the University; but such active employment by such professor, instructor, or employee may, upon the recommendation of the President of the University and upon approval by the Board of Regents, be exercised, if in their judgment it be deemed expedient, elsewhere than at Berkeley.

At a meeting of the Regents of the University of California, held December 26th, the following degrees were conferred:

The degree of Master of Letters upon:—Guenevere Metkiff, B.L. (Pomona College), Pomona.

The degree of Master of Science upon:—Minnie Reed, B.S. and M.S. (Kansas State Agricultural College), Berkeley; Perley Gilman Nutting, A.B. (Leland Stanford Jr. University), Berkeley.

The degree of Bachelor of Arts upon:—Lucia Hester Fish, Oakland; Helen Augusta Frost, A.B. (Emporia College), San Diego; Alexander Marsden Kidd, San Francisco; Margaret Lillian Matthew, Berkeley; Nannie Fessenden Skimmings, Berkeley; Sarah Elizabeth Marquand Smoot, Berkeley; Katharine Stack, Berkeley; Aimée Steinhart, San Francisco.

The degree of Bachelor of Letters upon:—Edith Sara Brownsill, Alameda; Julia C. Eppinger, San Francisco; George Hillary Harlan, Sausalito; Victor Hendricks Henderson, Los Angeles; Lena Florence McDonald, East Oakland; Duncan McDuffie, Santa Barbara; Flora Ernestine Mitchell, Alden; Nellie Vance, Stockton.

The degree of Bachelor of Philosophy upon:—Corinne Carter, San Diego; Caroline Duval Ellsworth, Los Angeles; Charles Edmund Fryer, Oakland; Charlotte Mignon Hoffman, Oakland; Harry Arlyn Linseott, Santa Cruz; Isabella Mogeau, San Bernardino; Walter Newman, Santa Cruz.

The degree of Bachelor of Science upon:—Earl Wiswall Garrison, Redlands; Adelaide Mary Hobe, San Francisco; Louise Hamlin Johnson, Berkeley; Jennie Louisa Powers, Kings River; Frank Freeman Ellis, Berkeley; William Thompson Skilling, Los Angeles; Allan Corey Burdick, Thermalito; Herbert William Crozier, San Francisco; Nelson Wamsley Thompson, San Francisco.

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## AN APPEAL TO CLASSICAL GRADUATES.

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The following letter has been sent to classical graduates of the University, and friends of Greek literature and art in California:

The American School of Classical Studies at Athens was founded in 1881, for the purpose of affording to American graduates an opportunity to carry on advanced studies in Greek literature and art, amid the inspiring influences of residence in Greece, with congenial companionship and suitable instruction. For eighteen years the school has been doing a work for American scholarship the value of which can hardly be over-estimated. It has been supported by the voluntary contributions of a number of

leading universities and colleges, aided by the gift of a choice lot of land from the Greek government.

The University of California joined the group of universities supporting the School in 1895. Our annual contribution of two hundred and fifty dollars has been kept up by the generous gifts of a very small number of graduates and friends of the University. Meantime the authorities of the School have come to the conclusion that the present method of raising the necessary income, by voluntary contributions, is too inconvenient and precarious to satisfy the growing demands of the School. They have, therefore, made an urgent request for a permanent endowment of two hundred and fifty thousand dollars. Our own share of this proposed endowment amounts to something over five thousand dollars, and the classical graduates of the University, and lovers of Greek art and Greek literature in the community generally, are asked to furnish this amount, that the University of California may not lag behind her sisters in the East in supporting so beneficent an enterprise. The School is open to men and women alike, and any graduate of the University of California who desires to avail himself of its privileges is offered free instruction, and quarters in the School building so far as the space allows.

It may be felt by some that it is a "far cry" from California to Athens, and that all our money is needed at home. But if our University is to be worthy of the great future which lies before it, it is absolutely necessary that we keep in touch with the sources of artistic and literary inspiration in the ancient world. We cannot afford to let it be said of us that we care only for the external and the practical. We desire to let it be seen that in education as in architecture, only the best is good enough for California. Surely no time could be more propitious for such an appeal than the present, when the whole University is throbbing with new life and hope, and when the plans and anticipations of its friends refuse to stop short of anything but the

very highest ideals. No loyal graduate, or public-spirited citizen, will be willing, at a time like this, to have it said that our University cannot do its part for the American School, along with Harvard, Yale, Columbia, Cornell, Chicago, and all the others, including Vassar and Bryn Mawr.

The following special suggestions are respectfully offered:

1. That every person to whom this request is sent contribute *something*, if only a single dollar. The amount to be raised is considerable, and only an earnest and unanimous effort will be successful.

2. That persons of larger means contribute as liberally as possible. It is hoped that there will be many gifts of one hundred, or fifty, or twenty-five dollars.

3. That each classical graduate, so far as possible, shall add to his own contribution such sums as he may be able to collect from other friends of classical studies in his acquaintance, who are not graduates of the University. Copies of this circular will be freely furnished, or mailed to any address which may be suggested.

An early reply is solicited, as the subscription should be completed early in December. All gifts will be acknowledged promptly. Please send subscriptions to the Recorder of the Faculties, or to

EDWARD B. CLAPP,

(Professor of Greek)

1 Bushnell Place, Berkeley.

The above appeal is signed and approved by

BENJAMIN IDE WHEELER,

President of the University.

ARTHUR RODGERS,

Member of the Board of Regents.

